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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------------|------------------|
| 10/554,916 | 10/31/2005 | Emil Zellweger | Q90959 | 9776 |
| 23373 7590 02/12/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037 | | | EXAMINER KARACSONY, ROBERT | |
| | | | ART UNIT | PAPER NUMBER |
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| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/554,916 | Applicant(s) ZELLWEGER ET AL. | |
| | Examiner Robert Karacsony | Art Unit 2821 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10312005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed on October 31, 2005 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file and the information referred to therein has been considered. Examiner requests that applicant submits a completed form "1449" complying with the requirements listed above.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 12-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear to the examiner what the applicant means by "on the one hand" and "on the other hand". For examination purposes examiner interprets them to mean "at one end" and "at the other end".

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 12 and 18-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Koyama (US 6,531,988).

Claim 12: Koyama teaches a wristwatch (100) including a case (4) at least one part of which is electrically conductive (7, col. 3/line 22) and in which are housed an electronic module (8) including a printed circuit board (2) and an electric power source (6) for powering said electronic module (col. 6/lines 22-23), said wristwatch further including an antenna (1) provided with a ground plane (15), said printed circuit board having, at its periphery (outer surface of circuit substrate 2), a mechanical contact zone (bottom surface of circuit substrate 2) with said electrically conductive part of the case (fig. 1),

wherein the antenna and the ground plane are arranged on the top face of said printed circuit board (fig. 1), said top face being arranged on the side of a display device (10) of the wristwatch (fig. 1), and wherein said printed circuit board includes a conductive path (the conducting path that is used to connect the ground pattern, 15, to case back, 7; col. 3/lines 22-27) extending at the periphery of said printed circuit board (since the conductive path is used to electrically connect the ground pattern, 15, and the case back, 7, it must necessarily extend at the periphery of the printed circuit board), over said mechanical contact zone (since the ground

pattern, 15, is on the top surface of the PCB, a connection of the conductive path must begin on top as well, which makes it over the mechanical contact zone), and establishing an electric contact (col. 3/lines 22-27), at one end, with said electrically conductive part of the case (col. 3/lines 22-27) and, at the other end, with said ground plane (col. 3/lines 22-27) so as to enlarge the ground plane of said antenna (electrically connecting 7 to 15 requires that the ground plane will be enlarged) in directions extending substantially in the extension of said ground plane (fig. 1), the enlargement being located substantially in the plane containing the ground plane of the antenna (fig. 1).

Claim 18: Koyama teaches said conductive path is arranged on a first face of the printed circuit board (top surface of PCB) and is electrically connected to other conductive paths (17) of the electronic module via metallised holes (18).

Claim 19: Koyama teaches said electrically conductive part of the case is electrically connected to a pole of determined electric potential (determined electric potential is the electric potential of the terminal it is attached to on the power source) of the electric power source (col. 6/lines 22-25), said electrically conductive part of the case being used to bring said determined electric potential to said electronic module via said conductive path (the electronic module will be brought to the electric potential of the electrically part of the case via the conductive path).

Claim 20: Koyama teaches said electrically conductive part of the case is brought to a determined electric potential (determined electric potential is the electric potential of the ground pattern) via said conductive path (the electrically conductive part of the case will be brought to the electric potential of the ground pattern via the conductive path).

Claim 21: Koyama teaches said conductive path extends over substantially the entire periphery of the printed circuit board (fig. 8 illustrates 17, which is an extension of the ground plane, extending over substantially the entire periphery of the circuit substrate).

Claim 22: Koyama teaches said conductive path extends over at least a part of the periphery of the printed circuit board located in the proximity to said ground plane (since the conductive path is used to electrically connect the ground pattern and the case back it must necessarily extend over at least a part of the periphery of the printed circuit board located in the proximity to said ground plane).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama in view of Bokhari et al. (US 5,646,634).

Claim 13: Koyama teaches all of the limitations of claim 12, as discussed above. Koyama fails to teach said antenna is a micro-strip antenna including a radiating element arranged substantially parallel to said ground plane. However, Bokhari et al. teach a microstrip antenna suitable for use in watches (col. 1/lines 45-47) that are able to emit and/or to receive GPS (Global Positioning System) signals (col. 1/lines 8-19), which is compact, and relatively simple and inexpensive to manufacture (col. 1/lines 39-41). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the

microstrip antenna of Bokhari et al. as the antenna element of Koyama in order to have utilized its small size and relatively simple and inexpensive manufacturing cost benefits.

If the modifications to the invention of Koyama were made, as discussed above, one with ordinary skill in the art would have realized that the microstrip antenna of Bokhari et al. would have had its radiating element arranged substantially parallel to said ground plane.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama in view of DeSantis et al. (US 5,244,395).

Claim 14: Koyama teaches all of the limitations of claim 12, as discussed above. Koyama fails to teach it includes an electrically conductive strip made of compressible material that is inserted, on said mechanical contact zone, between said electrically conductive part of the case and said conductive path. However, DeSantis et al. teach electrically connecting a metal frame of a two-radio to the ground of the PCB (col. 3/lines 5-11) using a conductive elastomer (elastomers are compressible), which provides an effective electrical interconnection when the two surfaces are not smooth or parallel (col. 3/lines 51-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the conductive elastomer of DeSantis et al. with the invention of Koyama in order to have provided an effective electrical interconnection between the PCB and the case.

Claim 15: Claim 15 is rejected for substantially the same reasons as claim 14, as discussed above. (If the combination had been made, as discussed above, one with ordinary skill in the art would have realized the conductive elastomer would be compressed between the PCB and the shoulder (Koyama – fig. 1, the outermost higher step-up in case back, 7) of the electrically conductive part of the case)

Claim 16: Koyama teaches it further includes a support element (screws) exerting a pressure at several points of the periphery of said printed circuit board where said electrically conductive strip is compressed. (col. 6/lines 28-29, the screws used to secure the front and back casing of Koyama will exert a pressure at several points of the periphery of said printed circuit board where said electrically conductive strip is compressed)

Claim 17: Claim 17 is rejected for substantially the same reasons as claim 14, as discussed above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Karacsony whose telephone number is 571-270-1268. The examiner can normally be reached on M-F 7:30-5 EST with alternating Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Douglas L. Owens 2/5/07
DOUGLAS W. OWENS
PRIMARY EXAMINER